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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,143	03/31/2004	Angel Stoyanov	WEYE121925/25324	8224

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EXAMINER	
CORDRAY, DENNIS R	
ART UNIT	PAPER NUMBER
1731	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	04/19/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/19/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patents@weyerhaeuser.com

Office Action Summary	Application No.	Applicant(s)	
	10/815,143	STOYANOV ET AL.	
	Examiner	Art Unit	
	Dennis Cordray	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 October 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 3-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

By this Office Action, the finality of the previous Office Action is hereby withdrawn and prosecution is reopened. The previously indicated allowability of claims 1, 3-4 and 10-13 is withdrawn in view of reconsideration of the prior art of record. Rejections based on the references follow.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 2-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 10 recite "bleached polyacrylic acid crosslinked cellulosic fibers" and "polyacrylic acid crosslinked cellulosic fibers treated with a bleaching agent", but do not clarify whether the bleaching of the fibers occurs prior to or subsequent to crosslinking. The claims also do not clarify whether the claimed increase in Whiteness Index occurs in the fibers prior to or subsequent to crosslinking.

Claims 1, 5 and 10 recite that the Whiteness Index "increases from a first value determined initially after treatment with the bleaching agent to a second value determined up to 14 days after treatment with the bleaching agent." It is not clear when the initial determination of Whiteness Index is made. For instance, is the initial value determination made immediately after contact with the bleaching agent and the second value determined at the end of the bleaching step? Is the initial value determination

made after a first bleaching step, with or without a washing step, and the second determination after a subsequent bleaching step? In either case, the second determination would be expected to show a higher Whiteness Index than the first? Or is the initial value determination made after a bleaching step and the second determination after a time interval with no intervening treatment steps between the determinations?

The remaining claims depend from and thus inherit the indefiniteness of Claims 1, 5 or 10.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 3 and 10-13 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Herron et al (5549791).

Herron et al teaches crosslinking agents known in the art for use with cellulosic fibers, including C2-C9 polycarboxylic acids and polymeric polyacrylic acid (col 3, lines 15-53). Herron et al also discloses that polymeric polyacrylic acid is a preferred crosslinking agent because it is stable at higher temperatures and the crosslinked fibers

are brighter than those crosslinked with alpha hydroxyl acids. In addition, absorbent structures made from fibers crosslinked by polymeric polyacrylic acid have increased wet and dry resilience (col 3, lines 50-62).

Herron et al discloses that the fibers used in the invention may be partially or completely bleached and that bleached fibers are preferred for their superior brightness and consumer appeal (col 5, lines 30-35). Chlorine free bleaching processes can be used (col 5, lines 35-37). Herron et al also discloses that post crosslinking bleaching steps are known (col 13, lines 14-16).

Herron et al discloses absorbent pads (absorbent products) made using the fibers (cols 24-26, Examples VI-IX).

The fibers of Herron et al are thus bleached polyacrylic acid crosslinked cellulosic fibers and appear to be substantially identical to the claimed fibers. The limitation, "wherein the Whiteness Index of the fibers...increases from a first value determined initially after treatment with the bleaching agent to a second value determined up to 14 days after treatment," is not a limitation of the claimed structure itself, but a property thereof. The fibers of Herron et al will have or, at least, it would have been obvious to one of ordinary skill in the art to obtain, the claimed increase in Whiteness Index because, where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). In

other words, when the structure recited in the reference is substantially identical to that of the claims, the claimed properties or functions are presumed to be inherent.

"When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Herron et al does not explicitly disclose hydrogen peroxide bleaching; however hydrogen peroxide bleaching is a chlorine free process and would have been an obvious option to one of ordinary skill in the art at the time of the invention.

Herron et al discloses that the fibers are useful in absorbent structures, such as paper towels and absorbent cores for diapers, sanitary napkins and catamenials (Abs; col 5, lines 37-40). Thus paper towels, diapers, sanitary napkins and catamenials comprising the fibers would have been obvious to one of ordinary skill in the art.

Claims 1 and 3-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cook et al (5562740) in view of Herron et al (5549791).

Cook et al discloses individualized polycarboxylic acid crosslinked fibers that have been after bleached with an aqueous solution of sodium hydroxide and hydrogen peroxide (col 3, lines 42-45; col 13, lines 65-67). Cook further discloses an amount of sodium hydroxide to be applied of about 0.07 weight % to about 1.8 weight % of the dry fibers (1.4 to 36 lb/ton) and an amount of hydrogen peroxide to be applied of about 0.02 weight % to about 1.5 weight % of the dry fibers (0.4 to 30 lb/ton) (col 4, lines 42-45 and 49-51). The disclosed ranges of Cook et al for sodium hydroxide and hydrogen

peroxide concentrations substantially overlap the claimed ranges. Cook et al discloses that the polycarboxylic acid crosslinked fibers can be treated by spraying sodium hydroxide and hydrogen peroxide onto an air stream containing the fibers (col 14, lines 18-20). Alternatively, multistage bleaching and washing steps following crosslinking are embodied (col 14, lines 27-30).

Cook et al discloses that the fibers are useful in absorbent structures, such as paper towels and absorbent pads for diapers, sanitary napkins and catamenials (Abs; col 5, line 66 to col 6, line 1).

Cook et al does not disclose crosslinking with a polyacrylic acid.

The disclosure of Herron et al is detailed in the above rejection of Claims 1, 3 and 10-13.

The art of Cook et al, Herron et al and the instant invention is analogous as pertaining to bleached crosslinked fibers and absorbent products made therefrom. It would have been obvious to one of ordinary skill in the art to use a polymeric polyacrylic acid crosslinking agent in the fibers of Cook et al in view of Herron et al to provide brighter fibers and increased wet and dry resilience in absorbent structures made therefrom.

The crosslinking agent, bleaching agent(s) and all of the claimed method steps have been disclosed by or made obvious over Cook et al in view of Herron et al. The resulting composition or structure, bleached polyacrylic acid crosslinked fibers, is also disclosed or made obvious and appears to be substantially identical to the claimed structure. The fibers of Cook et al in view of Herron et al will have or, at least, it would

have been obvious to one of ordinary skill in the art to obtain, the claimed increase in Whiteness Index for reasons given in the above rejection of Claims 1 and 10-13 over Herron et al.

Alternatively, when using the multistage bleaching and washing process disclosed by Cook et al, it would have been obvious to one of ordinary skill in the art to obtain an increased Whiteness Index following each successive bleaching stage over the value following the preceeding stage.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Cordray whose telephone number is 571-272-8244. The examiner can normally be reached on M - F, 7:30 -4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DRC

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